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**DRAFT – FOR CONSIDERATION AT THE OCTOBER 18, 2007  
MEETING OF THE HIGHLANDS COUNCIL**

**RMP Program: Wastewater System Maintenance**  
***Version: October 17, 2007***

<p><b>Issue Overview</b></p>	<p>All development requires some form of wastewater treatment system. All forms of wastewater treatment systems require proper operation and maintenance (O&amp;M). Unfortunately, most homeowners do not properly maintain their septic systems and many do not operate them properly, leading to failures that put human health and the environment at risk. Local Health Boards have the authority to require correction of failures, but maintenance is more cost-effective for land owners, municipalities and the environment. NJDEP has proposed that all municipalities have some form of septic system maintenance program, but has no ability to mandate such programs where the municipality decides not to participate in Wastewater Management Plans. Only a few Highlands municipalities currently have such programs, and smaller municipalities will likely need assistance to implement septic system maintenance programs. Finally, in some cases, primarily in older communities, homes do not have modern septic systems but instead rely on cesspools or even less effective discharge methods. In all cases, increased septic system density and proximity to sensitive resources (e.g., wells, surface waters) increase the importance of proper O&amp;M.</p> <p>Community-based systems, such as communal septic systems and small treatment systems, are regulated by NJDEP under the NJPDES program to ensure proper O&amp;M, but not all such system owners are financially and technically capable of ensuring that their systems routinely meet NJDEP requirements through decades of use. Moreover, NJDEP is prohibited from requiring that such facilities have co-permittees to ensure long-term compliance. While NJDEP can take enforcement action regarding its permit conditions, financial failure of the system owner is not easily remedied.</p> <p>Wastewater systems operated by utility authorities and municipal government are generally well-financed through fee-based programs that have a sufficient user base. In addition, NJDEP permitting and enforcement provides sufficient surety of proper O&amp;M. Accordingly, the RMP does not address O&amp;M for these systems.</p>
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<p><b>RMP Policies and Objectives Addressed</b></p>	<p><b>Objective 2.4.3.3.3.</b> <i>(Protection and Conservation Zones) Expansion of wastewater service shall be permitted in areas where there is a pattern of documented failing septic systems located within Existing Areas Served, or adjacent to Existing Areas Served where the failing septic systems cannot reasonably be addressed through rehabilitation or replacement of the existing septic system.</i></p> <p><b>Objective 2.4.3.4.3.</b> <i>(Planned Community Zone) Allow the expansion or creation of wastewater collection systems beyond Existing Areas Served to serve lands which are appropriate for infill or redevelopment, or to serve areas identified as public health concerns due to failing septic systems where the failing septic systems cannot reasonably be addressed through rehabilitation or replacement of the existing septic system.</i></p> <p><b>Objective 2.4.3.5.1.</b> <i>Allow community-based on-site treatment facilities for those areas located outside Existing Areas Served and have public health concerns due to failing septic systems; these facilities shall only serve existing wastewater and shall not include infrastructure to support future growth.</i></p> <p><b>Policy 2.4.4.5.</b> To establish minimum standards for the placement, design, monitoring and maintenance of septic systems necessary to protect, restore, and enhance ground water quality.</p> <p><b>Objective 2.4.5.2.1.</b> <i>Identify innovative technologies that may be appropriate for the design, installation and maintenance of on-site wastewater treatment systems to minimize impairment to ground water or surface water quality due to elevated nitrate concentrations providing the systems meet the minimum standards of N.J.A.C. 7:9A.</i></p>
<p><b>Program Summary</b></p>	<p>This program helps to ensure that on-site and small community wastewater treatment systems are properly maintained, using methods that complement NJDEP's existing or proposed requirements. It is focused primarily on septic system maintenance and on small community-based systems (e.g., package plants).</p> <p>Regarding septic systems, the primary purposes are: (1) to ensure that their O&amp;M minimizes the potential threat to public health and the environment, and (2) to reduce the potential need for creation or expansion of sewer systems into non-sewered areas. In many cases, the expansion or creation of sewerage to address septic system failures or excessive density is very costly and could increase demand for other development in inappropriate areas.</p> <p>Regarding the community systems, the primary purposes are: (1) to ensure that the systems retain their viability through proper O&amp;M, and (2) to prevent the need for a transfer of system ownership due to fiscal collapse.</p>
<p><b>Routine Maintenance of Residential Septic Systems</b></p>	<p><b>Program Description</b></p> <p>Municipalities shall, as a requirement of Plan Conformance, adopt municipal or Board of Health programs and ordinances (or participate in regional Board of Health programs) to improve the maintenance of existing and new residential septic systems, based on the most appropriate management model as discussed in RMP Water Resources Technical Report, Watershed and Water Quality, Management of Septic Systems and Other Decentralized Treatment Facilities.</p> <p>The following maintenance standards apply:</p> <ol style="list-style-type: none"> <li>1. Municipalities shall, at a minimum, implement the programs required under the Water Quality Management Planning rules, N.J.A.C. 7:15;</li> </ol>

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	<ol style="list-style-type: none"> <li>2. Where septic systems exist at a density equal to or lower than the LUCM Zone target, and are not within a Wellhead Protection Area or Highlands Open Water Buffer area, proper O&amp;M shall be encouraged through the annual provision of information to the landowner regarding O&amp;M responsibilities;</li> <li>3. For septic systems other than those in Step 2, proper <u>operation</u> shall be encouraged through annual information to the landowner regarding operation responsibilities, and <u>maintenance</u> shall be ensured through a regulatory system requiring proof of proper maintenance, including but not limited to septic system pump-out, methods to prevent solids and grease migration into the distribution system, and no evidence of chemical disposal that disrupts the biological treatment of wastes.</li> </ol>
<p><b><i>Lifecycle Maintenance of Residential Septic Systems</i></b></p>	<p><b>Program Description</b> Municipalities shall, as a requirement of Plan Conformance, adopt municipal or Board of Health ordinances (or participate in regional Board of Health programs) addressing the long-term maintenance needs of new residential septic systems, by requiring that each developed lot include and specify an area equivalent to 100% of the approved disposal area for future expansion or replacement of the disposal field, including proof of compliance with NJDEP requirements for septic systems under N.J.A.C. 7:9A. All septic system drain fields eventually fail as solids and microbial growth clog the field, and therefore require a replacement field to ensure that the system will not fail without potential for rehabilitation at great cost.</p>
<p><b><i>Upgrading &amp; Replacement of Residential Cesspools and Other Inadequate Wastewater Systems</i></b></p>	<p><b>Program Description</b> Municipalities shall, as a requirement of Plan Conformance, adopt municipal programs or Board of Health ordinances (or participate in regional Board of Health programs) addressing the upgrade of residential wastewater systems that do not perform in a manner similar to or better than standard septic systems.  Specifically, at least at time of system failure or property sale, whichever comes first, residential cesspools and other inadequate systems must be upgraded to meet NJDEP Individual Subsurface Disposal System requirements to the maximum extent feasible given site conditions. Priority shall be placed on such systems that are located in dense development that is dependent on on-site systems, or are within a Wellhead Protection Area or Highlands Open Water Buffer area.</p>
<p><b><i>Upgrading of Septic Systems to Address Pollution Threats</i></b></p>	<p><b>Program Description</b> For ground water quality, unlike surface water quality, there is no specific program for identifying areas of potential contamination and developing a management plan to restore ground water quality. The Highlands Council shall use its available information on residential development outside of sewer service areas to define locations where existing septic system density significantly exceeds the LUCM Zone or NJDEP nitrate targets, as potential contamination areas related to septic system density. The Highlands Council will rank the areas by size, severity and threat to human health and the environment, and work with municipalities to identify cost-effective methods, where available, to restore ground water quality.</p>

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	<p>Methods may include one or more of the following:</p> <ol style="list-style-type: none"> <li>1. Upgrade of existing septic systems to alternative on-site treatment systems, at times which maximize cost-effectiveness of the upgrade (e.g., when existing systems fail). Where the alternative systems require special O&amp;M, they should only be implemented if the O&amp;M is ensured;</li> <li>2. Replacement of individual septic systems with a communal septic system or communal alternative treatment system, with ownership and management in place to ensure O&amp;M;</li> <li>3. Replacement of individual septic systems with a community-based wastewater treatment system sized to address only the project area, with ownership and management in place to ensure O&amp;M;</li> <li>4. Extension of public sewerage where it will not have significant secondary effects such as pressures to develop other areas in Conservation and Protection Zone, which are inappropriate for sewerage.</li> </ol>
<p><i>Alternative Management Approaches for New Septic Systems</i></p>	<p><b>Program Description</b></p> <p>The traditional approach to septic systems is ownership, operation and maintenance of septic systems by the homeowner. Maintenance is usually not performed, and few homeowners are aware that septic systems have a lifespan and will require replacement, usually at a very high cost. As an optional approach, developers, municipalities, counties and the Highlands Council should consider the establishment of alternative management systems.</p> <p>The following general concepts would ensure that septic systems are managed in a manner more equivalent to other utility services, with proper maintenance and methods to ensure that homeowners do not face major, unanticipated costs:</p> <ol style="list-style-type: none"> <li>1. Ownership of the septic system may remain with the homeowner or, similar to other utility services, be placed with a public or investor-owned utility;</li> <li>2. Where the septic system remains the property of the homeowner, a mandatory condition of development approval would be a requirement that each homeowner have a maintenance contract for the entire life of the septic system and any replacement;</li> <li>3. The maintenance contract would provide for routine maintenance, repairs and ultimate replacement, with costs spread over the contract life;</li> <li>4. Where septic system ownership is with the utility, a fee-based system would address life-cycle costs for routine maintenance, repairs and ultimate replacement.</li> </ol>
<p><i>Requirements for New Small-Community Wastewater Systems</i></p>	<p><b>Program Description</b></p> <p>Proposals for development in a Planned Community Zone, Council-designated redevelopment or brownfields site, Council-approved cluster development site, or Council-approved replacement of existing septic systems for public health reasons may require the use of a community-based wastewater treatment system.</p> <p>These systems must be addressed through municipal Plan Conformance approval and must meet the following requirements:</p>

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<p><b><i>Management of Existing Small-Community Wastewater Systems</i></b></p>	<p><b>Program Description</b></p> <p>Where community-based wastewater systems already exist, their continuing financial viability and proper O&amp;M are of concern. All such facilities should already be part of an Areawide Water Quality Management Plan or component Wastewater Management Plan, and permitted by NJDEP under the NJPDES program. Where the owner/operator is a utility authority, municipal utility, State agency, or investor-owned utility regulated by the NJ Board of Public Utilities, no action is needed.</p> <p>Municipalities, counties and the Highlands Council should explore methods by which other facilities can continue to provide sufficient treatment throughout the lifespan of existing communities. Options include:</p> <ol style="list-style-type: none"> <li>1. Requirements for annual reports from the system owner/operator discussing revenue, expenditures, reserve funds, O&amp;M issues, etc., to help identify potential concerns that should be addressed;</li> <li>2. Allowing homeowners associations to transfer ownership of the system to a utility authority, municipal utility, State agency, or investor-owned utility regulated by the NJ Board of Public Utilities, with a fee-based system for future O&amp;M;</li> <li>3. Establishing a special taxation district to provide funding for system O&amp;M in lieu of homeowner association dues, etc.;</li> <li>4. Establishing a regional utility authority to either take ownership of or provide O&amp;M services under contract for multiple community-based systems.</li> </ol>